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Remarks/Arguments

Prior to this amendment Claims 13-18 and 29-34 were pending. Claims 35-37 are new. Claims 15-18, 29, 32 and 34 are amended. Claims 15-18, 32 and 34 are amended to change the dependency. Support for the amendment of claim 29 is found throughout the specification, for example at p. 6, lines 9-35 and in the figures, such as Figure 1. Support for new claim 35 is found in the claims as filed. Support for new claim 36 is found throughout the specification, for example at p. 10, lines 11-16 and p. 12, lines 7-9. Support for new claim 37 is found in the claims as filed and throughout the specification, for example at p. 12, line 8 and in Figure 1. No new matter is introduced by way of this amendment.

Applicants acknowledge with appreciation the helpful telephone interview with the Examiner on October 7, 2003.

Claim Rejections under 35 U.S.C. § 103

Claims 13-18, 29, 30 and 32-34 are rejected under 35 U.S.C. § 103 as being unpatentable over Whitehead et al (US 4,879,097 (Whitehead)) in view of Kolehmainen et al (US 4,349,510 (Kolehmainen)).

The Examiner's position appears to be that Whitehead discloses an apparatus with a lid, base plate and sealant as described in the claims and that the secondary reference teaches an O-ring as a sealant which inherently produces an air-tight seal. Applicants respectfully traverse. In

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addition, it appears that claim 31 also is rejected because the Examiner discusses the teaching of Kolehmainen et al as it allegedly relates to claim 31. However, claim 31 is not explicitly rejected. In the event that claim 31 is rejected, Applicants respectfully traverse.

Whitehead describes a recording apparatus that includes a holder for a reaction vessel that is closed to prevent entry of stray light.

Kolehmainen relates to automatic transportation, processing and measurement of chemiluminescence and bioluminescence in discrete samples contained in depressions on a light reflecting tape. Emitted light from samples in the depressions of the reflecting tape is conducted through bundles of optical fibers to photomultiplier tubes.

In contrast, claim 13 is directed to a hybridization chamber that includes a base plate with a cavity for holding a first array component formed in the base plate, a lid comprising at least one component port for immobilizing a second array component, and a sealant between the lid and baseplate forming an airtight seal.

Moreover, claim 29, as amended, is directed to a hybridization chamber comprising a base plate comprising a base cavity, a first array component in said base cavity, wherein the first array component comprises a plurality of assay locations, a lid comprising a plurality of first component ports, wherein each of the component ports comprises a second array component wherein said second array components align with corresponding assay locations of said first array component, a sealant between the base plate and the lid forming an airtight seal

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When rejecting claims under 35 U.S.C. §103, the Examiner bears the burden of establishing a *prima facie* case of obviousness. See, e.g., *In re Bell* 26 USPQ2d 1529 (Fed. Cir. 1993); M.P.E.P. Section 2142. To establish a *prima facie* case, three basic criteria must be met: (1) the prior art, either alone or in combination, must teach or suggest every limitation of the rejected claims; (2) the prior art must provide one of ordinary skill with a suggestion or motivation to modify or combine the teachings of the references relied upon by the Examiner to arrive at the claimed invention; and (3) the prior art must provide one of ordinary skill with a reasonable expectation of success.

Here, Applicants submit that the Examiner has failed to provide adequate motivation for the combination of the references. The Examiner suggests that motivation is found in the “known and expected result of providing an alternative means recognized in the art to achieve the same result, sealing the interior of the reaction region from exterior light. Use of an o-ring as suggested by the reference of Kolehmainen et al. would inherently result in an airtight seal.” However, Applicants respectfully submit that this is insufficient motivation.

To this end, Applicants note that the purpose of the light proof barrier of Whitehead is to prevent the entry of light into the chamber. Applicants note that it is unclear to what extent the ribs (element 21 of figure 1) form a seal. Nevertheless, the purpose of the o-ring of Kolehmainen is to prevent detection of outside light by the separate detectors contacting the reflective tape (col. 4, lines 11-14). That is the o-ring of Kolehmainen is placed between the sample and the detector such that the detector does not detect stray, contaminating light, for

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example, from an adjacent sample well. With this in mind, Applicants note that any motivation to combine the o-ring of Kolehmainen with the apparatus of Whitehead would suggest placing the o-ring between the sample well and the detector of Whitehead. Applicants note that the detector of Whitehead is the film that sits under the sample well. Thus, one skilled in the art would have been motivated to place the o-ring under the sample well of Whitehead or some other way between the sample well and the film, but would not have been motivated to place a sealant between the base plate and the lid forming an airtight seal.

Moreover, Applicants draw the Examiner's attention to In re Lee, 61 USPQ2d 1430 (CA FC 2002). In this case, the Examiner rejected the claims under 35 U.S.C. §103 and stated that the required motivation "would be that the automatic demonstration mode is user friendly and it functions as a tutorial". Id at 1435. The Federal Circuit stated that "deficiencies of the cited references cannot be remedied by the Board's general conclusions about what is "basic knowledge" or "common sense". The Board's finding must extend to all material facts and must be documented on the record, lest the "haze of so-called expertise" acquire insulation from accountability. "Common knowledge " and "common sense", even if assumed to derived from the agency's expertise, do not substitute for authority when the law requires authority." (citing In re Zurko, 59 USPQ2d 1693 (CA FC 2001); see Lee, 1434-1435).

In the present rejection, the Office Action fails to set forth anything specific in the cited references that would suggest the motivation to combine the references of Whitehead with the secondary reference. While the Office Action suggests motivation is found in the "known and

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expected result of providing an alternative means recognized in the art to achieve the same result, sealing the interior of the reaction region from exterior light”, Applicants submit that this is a “common sense ” argument, impermissible under In re Lee.

Accordingly, Applicants submit that a *prima facie* case of obviousness has not been established. Applicants respectfully request the Examiner to withdraw the rejection.

Moreover, with respect to claim 29, Applicants respectfully submit that again the Office Action has provided insufficient motivation for the combination of the references as noted above. In addition, Applicants submit that even assuming, *arguendo*, that there was motivation to combine the references not all of the claim elements are taught in the cited references. To this end Applicants note that claim 29 as amended recites that the first array component in the base cavity includes a plurality of assay locations and that the lid comprises a plurality of first component ports each comprising a second array component, wherein the second array components align with corresponding assay locations of said first array component.

Applicants note that neither of the cited references alone or in combination teach or suggest such a limitation of having the second array components align with corresponding assay locations of said first array component. That is, while Whitehead describe a plate with a plurality of reaction vessels, there is no teaching of a second array component in Whitehead. Moreover, there is no teaching in Whitehead of a system wherein the second array components align with corresponding assay locations of said first array component. That is, while Whitehead describes liquid dispensers that may align with some of the assay locations of the reaction

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vessels, these liquid dispensers are not second array components as claimed. Applicants note that in the context of a two-component system as described at p. 6, lines 25-35 of the specification, the array formed on the second substrate (second array component) includes individual arrays on each of the second array components which then correspond to the assay locations of the first array component. Thus, the dispensers of Whitehead are distinct from the second array component as claimed because they do not each include an individual array formed on them. Furthermore, there is no teaching or suggestion in Whitehead that the second array components align with corresponding assay locations of said first array component.

In addition, Applicants note that Kolehmainen fails to cure the deficiencies of Whitehead. Kolehmainen describes a mobile tape with wells for measurement of luminescence with a single light detector or consecutive rows of 2-10 samples or more for simultaneous measurement of luminescence with a multi-detector array having an equal number of individual detectors as there are samples in one row.

However, while Kolehmainen describes fiber optic bundles, the fiber optic bundles are not array components as claimed. That is, as noted above the second array component includes individual arrays on each of the second array components which can be fitted into the assay locations of the first array component. Thus, the fiber bundles of Kolehmainen are distinct from the second array component as claimed because they do not each include an individual array formed on them. Accordingly, Applicants submit that not all claim limitations are taught or

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suggested in the cited references either alone or in combination. Accordingly, for all of the foregoing reasons, Applicants respectfully request the Examiner to withdraw the rejection.

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CONCLUSION

Applicants respectfully request that the rejections be withdrawn, and submit that the application is now in condition for allowance. Early notification of such is solicited. If, upon review, the Examiner feels there are additional outstanding issues, the Examiner is invited to call the undersigned.

Respectfully submitted,

DORSEY & WHITNEY LLP



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David C. Foster, Reg. No. 44,685
Patent Agent for
Robin M. Silva, Reg. No. 38,304
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Four Embarcadero Center
Suite 3400
San Francisco, CA 94111-4187
Telephone: (415) 781-1989